

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:  
Rakib et al.

Art Unit: unknown

Examiner: Unknown

Serial No. 09/214,158

DOCKET: TER-004.2P

I.A. Filing Date: 12/23/98

I.A. Appl. No. PCT/US97/03984

For: **DATA TRANSMISSION USING ATM OVER HYBRID FIBER COAX**

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Assistant Commissioner  
of Patents and Trademarks  
Box PCT  
Washington, D.C. 20231

Morgan Hill, California

April 24, 2000

**ATTN: PCT LEGAL OFFICE**

**DECLARATION OF RONALD CRAIG FISH IN SUPPORT OF PETITIONS UNDER**

**37 CFR 1.181 (OR ALTERNATIVELY, UNDER 1.137(b) AND 1.47(a))**

Dear Sir:

**FACTS SUPPORTING PETITION UNDER 37 CFR 1.181 (OR ALTERNATIVELY  
UNDER 37 CFR 1.137(b))**

Being hereby warned that any false statements and the like herein are punishable by fine or imprisonment (18 U.S.C. 1001) and may jeopardize the validity of the application or any patent issuing thereon, the undersigned hereby declares that all statements herein are made of the declarants own knowledge and are true, and any statements made on information and belief are believed to be true.

My name is Ronald Craig Fish. I am a registered patent attorney (Reg. No. 28,843), and I wrote the patent application identified above. On 12/23/98, I filed the

national stage application that became the above entitled patent application. This patent application named three inventors: Amir Fuhrmann, Yehuda Azenkot and Selim Shlomo Rakib. This application was filed under 35 USC 371 based upon a prior PCT application having International Application Number PCT/US97/03984 and having International Filing Date of 12 March 1997. This application claimed three priority dates (Exhibit A):

08/616,071 filed March 14, 1996;

08/684,243 filed 19 July 1996; and

08/760,412 filed December 4, 1996

The complex sequence of events to be described herein is summarized in a timeline attached hereto as Exhibit A. Basically, the reason this case went abandoned, if in fact it is actually abandoned, is because the undersigned tried to withdraw the earliest of the three priority dates under a PCT rule that allows this to be done within 20 months of the priority date. However, this was done after the 19th month from that priority date but before the 20th month deadline. The problem was that the PCT requires a Chapter II demand to extend the deadline to enter the national stage to 30 months from the priority date to be filed before the 19th month and does not excuse the deadline if it has already passed when the priority date withdrawn under the PCT rule is withdrawn. The EPO recognized this anomalous situation and withdrew its holding that the EPO regional phase case was withdrawn and gave the applicants an additional month to enter the national stage there. Unfortunately, the applicants did not have sufficient money to enter the national stage in the EPO given the very high anticipated translation costs. This was the reason the earliest priority date was withdrawn in the first place.

The undersigned provided a draft of a PCT application to all three inventors

Rakib, Azenkot and Fuhrmann on 12 Mar 1997 (Exh B1 attached). The inventors did not make any changes, and the PCT application was filed in the US/RO on 12 Mar 1997 (Exh B). The PCT application claimed the three priorities listed above and designated a number of countries including the U.S.

The earliest priority application filed March 14, 1996 established a 19 month deadline under PCT article 39 to make a Chapter II election of March 14, 1997 and would have required the national stage to be entered by the 20th month or 14 Nov 1997. The CFO Linda Palmor of the assignee Terayon Corporation (now Terayon Communication Systems) did not elect to file a Chapter II demand before the deadline on 14 October 1997 and advised the undersigned by telephone call on or about 11 Nov 1997 I believe that Terayon did not wish to enter the national stage by the deadline of 14 Nov 1997 because of a shortage of funds. The undersigned advised her in that phone call that it might be possible to extend the deadline to enter the national stage by dropping the earliest priority date and filing a Chapter II demand. The undersigned was unaware during that call that when a priority claim is dropped under PCT Rule PCT Rule 90<sup>bis</sup>.3(a) any deadlines that have already passed based upon the priority date dropped are not extended per the operation of one clause in PCT Rule 90<sup>bis</sup>.3(d).

PCT Rule 90<sup>bis</sup>.3(a) establishes a deadline of 20 months from the priority date to withdraw a priority claim. In this case, the 20 month deadline was 14 Nov 1997. However, dropping the earliest priority claim under PCT Rule 90<sup>bis</sup>.3(a) did not extend the 14 October 1997 deadline to make the Chapter II demand like the undersigned thought it would. Linda Palmor agreed in the phone call on or about 11 November 1997 that we should drop the earliest priority date and file a Chapter II demand. The Chapter

II demand was prepared and filed on 12 November 1997 with a check for \$652 (which was never refunded by the PTO). On the same day, a letter FAXed to the US/RO to request dropping the 14 Mar 1996 priority claim (Exh C, D, E and F).

On 15 Nov 1997, the U.S. national stage case technically went abandoned for failure to pay the national fee since the Chapter II demand filed on 12 Nov 1997 was too late to extend the deadline for entering the national stage.

On information and belief based upon a telephone call between the undersigned and the personnel administrator at Terayon, on 27 Mar 1998, inventor Fuhrmann was involuntarily terminated from Terayon.

On 11 May 1998, the EPO indicated that the EPO national phase case was withdrawn for failure to pay the required fees by the 20th month from the earliest priority date that had been dropped under PCT Rule 90bis.3 (Exh G). On 15 May 1998, I sent a FAX to Mr. Aras at the EPO indicating that I believed the EPO had made a mistake in withdrawing the case on grounds that the earliest priority date had been withdrawn (Exh H). I had requested help on this matter from a foreign associate in Finland. On 28 May 1998, that foreign associate indicated that the EPO was looking into the matter and that WIPO had never received notice of the dropped priority date from the US/RO (Exh I).

On 3 Jun 1998, I received another e-mail from the Finnish associate that indicated that Mr. Graham at the EPO Receiving Section had requested WIPO to clarify the situation and that Terayon would not be prejudiced during the interim (Exh J).

On 1 Sep 1998, I received the International Preliminary Examination Report from the USPTO acting as the IPE Authority (Exh K). This indicated the USPTO still considered the PCT application an active file which was not abandoned and was in Chapter

II proceedings. Thus, I still had no idea the U.S. case was abandoned and thought I had successfully extended the deadline to enter the national phase in the U.S.

On 12 Oct 1998, I received a FAX from the foreign associate indicating that WIPO had examined the situation and held that PCT Rule 90bis.3(d) rendered the Chapter II demand too late it having been filed about one month after the 19 month deadline established by the dropped priority date. **However, the EPO, to avoid prejudice to applicants, decided to cancel the withdrawn status of the EPO regional case and give the applicants one additional month to pay the national stage fees and penalties to enter the EPO regional stage (Exh L).**

Ultimately, the client through Linda Palmor, decided not to enter the EPO regional phase because of the high expense of doing so. However, in a subsequent phone conversation with Shlomo Rakib, the date of which I do not recall, Dr. Rakib decided to continue to pursue the U.S. national phase case.

On 14 Dec 1998, the undersigned forwarded a copy of the application to be filed with the drawings and a Declaration for Patent Application in the U.S. national phase case based upon the PCT application (Exh M and N) to inventors Rakib and Azenkot by one letter and to inventor Fuhrmann by another letter. I requested Mr. Fuhrmann to sign the Declaration and send it back to me. He never did.

On 23 Dec 1998, I FAXed a copy of the Declaration again to inventors Rakib and Azenkot as they or their secretary had somehow misplaced it (Exh O - last page). On 23 Dec 1998, inventors Rakib and Azenkot faxed back the signed Declaration For Patent Application, and the U.S. National Stage patent application was filed along with a check for the U.S. national stage filing fee of \$593 (Exh O, P, Q and R). The filing fee was never refunded by the USPTO, and the application was assigned a serial number

09/214158. At this point, I still did not know the case was actually technically abandoned and, apparently, neither did the USPTO.

The 30 month deadline to enter the national stage based upon the second earliest priority date (the next one after the dropped date) expired on 19 Jan 1999.

On 3 Aug 1999, the USPTO, apparently still treating the U.S. national stage case as if it was not abandoned, mailed a NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 USC 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE indicating all necessary requirements except a Declaration that complies with 37 CFR 1.497(a) have been received (including acknowledgement that the U.S. national stage filing fee had been received.) (Exh S). This notification indicated the oath was defective because it was not signed by all the inventors.

On 12 Aug 1999, believing that Mr. Fuhrmann was not going to cooperate and sign the Declaration for Patent Application, the undersigned petitioned the USPTO under 37 CFR 1.47(a) to accept application without signature of inventor Fuhrmann.

On 8 Mar 2000, the undersigned received a decision on the petition under 37 CFR 1.47(a) indicating the petition was denied for failure to show a bona fide attempt to send the application papers to Mr. Fuhrmann along with the Declaration. The Decision also indicated the case was abandoned. This was the first time the undersigned knew the case was abandoned.

This declaration and petition were started on 9 April 2000. On 10 Apr 2000, the undersigned mailed to Mr. Fuhrman by registered mail at his last known address a copy of the specification and claims on file in the U.S. national stage patent application and another copy of the Declaration For Patent Application requesting Mr. Fuhrman sign it and return it to me. (Exh T - cover letter and receipt for registered mail package). I

also called Mr. Fuhrmann. As of 23 April 2000, he had not returned my call nor picked up the registered mail package.

**FACTS SUPPORTING PETITION UNDER 37 CFR 1.137(b)**

If the office treats this petition as a petition under 37 CFR 1.137(b), the following facts are known by the undersigned to be true. As to the first element, "the required reply", there are stated below under the heading FACTS SUPPORTING PETITION UNDER 37 CFR 1.47(a) all the facts which support granting the petition to accept the application without inventor Fuhrmann's signature. These facts are more comprehensive than the facts submitted in the previous petition under 37 CFR 1.47(a) and should satisfy all the deficiencies in those facts noted by petitions attorney Anthony Smith of the PCT legal office. Specifically, a copy of the application papers and the Declaration have now been supplied to Mr. Fuhrmann three times, and he still has not signed the Declaration For Patent Application.

There is included with the petition under 37 CFR 1.137(b) an authorization to charge deposit account 06-0932 the petition to revive fee required under 37 CFR 1.17(m) should the Commissioner elect to treat this as a petition under 37 CFR 1.137(b).

The undersigned hereby declares that the entire delay in filing the required reply (the Petition Under 37 CFR 1.47(a) to Accept the Application Without the Signature of Inventor Fuhrmann) from the due date for the reply to the NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 USC 371... (reply due on 9/3/99) until the filing of this PETITION TO WITHDRAW HOLDING OF ABANDONMENT UNDER 37 CFR 1.181(a) (OR UNDER 37 CFR 1.137(b) IN THE ALTERNATIVE) AND TO ACCEPT THE APPLICATION WITHOUT THE SIGNATURE OF INVENTOR FUHRMANN UNDER 37 CFR 1.47(a) was

**unintentional.** In fact the entire delay from the technical date of abandonment of 15 Nov 1997 until the filing of the PETITION TO WITHDRAW HOLDING OF ABANDONMENT UNDER 37 CFR 1.181(a) (OR UNDER 37 CFR 1.137(b) IN THE ALTERNATIVE) AND TO ACCEPT THE APPLICATION WITHOUT THE SIGNATURE OF INVENTOR FUHRMANN UNDER 37 CFR 1.47(a) **was unintentional.** This is because the undersigned did not know the U.S. national stage application was actually abandoned until the Decision by the PCT Legal Office on the former Petition under 37 CFR 1.47(a) was received on or about 8 Mar 2000. The facts supporting this statement that the delay was unintentional are as follows.

The above identified U.S. national stage application technically went abandoned on 15 Nov 1997 for failure to pay the U.S. national fee by the 20th month from the dropped priority date of 14 March 1996. However, the undersigned attorney of record mistakenly assumed based upon a misinterpretation of PCT Rule 90<sup>bis</sup>.3 that since the earliest priority date had been dropped and a Chapter II demand had been filed, that the new deadline for paying the U.S. national filing fee was 30 months from the second earliest priority date of 19 July 1996. That deadline was 19 Jan 1999, and the U.S. national stage application was actually filed on 23 Dec 1998 and the U.S. filing fee paid by check enclosed with the U.S. national stage application on 23 Dec 1998.

No notice of abandonment was ever sent by the United States Patent and Trademark Office at any time after the technical date of abandonment on 15 Nov 1997, and neither the Chapter II demand fee nor the filing fee paid on 23 Dec 1998 was ever refunded by the USPTO. On 3 August 1999, the undersigned received a notice of missing parts from the USPTO indicating that the USPTO apparently still considered the patent



application to be pending. Therefore, the undersigned did not know the U.S. national stage application was abandoned until the decision was received on the petition under 37 CFR 1.47(a).

**FACTS SUPPORTING PETITION UNDER 37 CFR 1.47(a)**

The petition under 37 CFR 1.47(a) to accept the national stage application without inventor's signature was denied on grounds there was not showing of a *bona fide attempt* to supply the application papers as well as the Declaration to Mr. Fuhrmann. This declaration should prove that Mr. Fuhrmann has actually been supplied the application's specification, drawings and claims three times and has been sent the Declaration for Patent Application for his signature twice.

The first time Mr. Fuhrmann was given a copy of the specification, claims and drawings of the PCT application was on or about 3 Mar 1997 (Exh B1).

The second time Mr. Fuhrmann was given a copy of the specification, claims and drawings of the PCT application was on or about December 14, 1998 (Exh B1). A Declaration for Patent Application was drafted which, on or about December 14, 1998, was sent to Mr. Fuhrmann, along with a copy of the patent specification, drawings and claims, at his last known address of 444 Saratoga Avenue, #15G, Santa Clara, California 95050 with a request for him to sign it and send it back to the undersigned. The same declaration was sent to the other two inventors. Both of the other two inventors signed the declaration and returned it, but Mr. Fuhrmann did not. Subsequent attempts to contact Mr. Fuhrmann by telephone both by myself and co-inventor Shlomo Rakib have failed. I asked Dr. Shlomo Rakib, co-inventor and an officer of the assignee to attempt to contact Mr. Fuhrmann to get him to cooperate, but apparently he was not successful in obtaining any cooperation since I have not heard from either Mr. Fuhrmann or Dr. Rakib

about his attempts to obtain Mr. Fuhrmann's cooperation.

The third time the specification, drawings and claims were sent to Mr. Fuhrmann (along with a Declaration for signature) was 10 April 2000. On that day, the undersigned mailed the specification, claims and drawings and a Declaration along with a request for signature to Mr. Fuhrmann at his last known address by registered mail (Exh T). I also called him and left a message on his answering machine. As of the filing date of this petition, he has not returned my call. He also refused the Registered Mail package as shown by Exhibit U which is a copy of the returned registered mail envelope showing that the inventor Fuhrmann refused to accept the package after it was forwarded by the Post Office to his new address at 2840 Concord Lane, Santa Clara, California.

Further, Declarant sayeth not.

Dated: April 24, 2000

Respectfully submitted,



Ronald Craig Fish  
Reg. No. 28,843  
Tel 408 778 3624  
FAX 408 776 0426

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to:

Commissioner of Patents and Trademarks, Washington D.C. 20231

on 4/24/2000  
(Date Of Deposit)



Ronald Craig Fish  
Reg. No. 28,843

**Exhibit A**  
**TER-004.2P NATIONAL STAGE ENTRY TIMELINE OF EVENTS**

<b>Date</b>	<b>Event</b>	<b>Exh</b>
14 Mar 1996	Earliest priority application filed in U.S.	A1
19 July 1996	Second earliest priority application filed in U.S.	A1
4 Dec 1996	Last priority application filed in U.S.	A1
3 Mar 1997	Draft application that is to become PCT International Application is sent to inventors Fuhrmann, Rakib and Azenkot for review. No changes were made.	B1
12 Mar 1997	PCT International Application filed designating U.S. and numerous other countries	B
14 Oct 1997	19 month PCT Article 32 deadline for filing Chapter II demand	
12 Nov 1997	<b>Chapter II demand filed along with PCT Rule 90<sup>bis</sup>.3 request FAXes to US Receiving Office to drop priority claim to 14 Mar 1996 priority claim. Check for \$652 included with Chapter II demand. Never refunded by US Receiving Office. U.S. Receiving Office Acknowledges receipt of Chapter II demand</b>	C & D & E & F
14 Nov 1997	20 month PCT Article 22 deadline from earliest priority date to enter national stage and pay national fee if no Chapter II demand made by 19th month deadline from earliest priority date, and <b>PCT Rule 90<sup>bis</sup>.3 20 month deadline to drop priority claims. US national fee for entry into national stage not paid inadvertently on grounds that attorney of record believed deadline to pay U.S. national fee was extended to 30 months from 19 July 1996 under Article 39 by virtue of dropping priority claim to 14 Mar 1996</b>	
15 Nov 1997	<b>U.S. national stage application technically abandoned by virtue of not having paid U.S. national fee on 14 Nov 1997 since PCT Rule 90<sup>bis</sup>.3(a) drop of priority claim to 14 Mar 1996 made on 12 Nov 1997 did not extend 19 month deadline to file Chapter II demand per PCT Rule 90<sup>bis</sup>.3(d) because 14 Oct 1997 deadline had already expired. No notice of abandonment sent by US/RO.</b>	
27 Mar 1998	Inventor Amir Fuhrmann fired from employment at assignee Terayon Communication systems	
11 May 1998	EPO indicates EPO national phase case is withdrawn for failure to pay national basic fee, search fees and designation fee by the 20 month deadline after the earliest priority date which was withdrawn on 12 Nov 1997 by FAX to US/RO	G

15 May 1998	I send a FAX to Mr. Aras at EPO indicating I believe the EPO case was mistakenly withdrawn on grounds that I had previously withdrawn the earliest priority date within the 20 month deadline pursuant to PCT Rule 90bis.3	H
28 May 1998	Having previously requested help from a foreign associate, I receive an e-mail from him indicating the EPO was looking into why the EPO application was withdrawn given that the earliest priority claim had been withdrawn and suggesting that WIPO had not received new of the priority claim drop from US/RO	I
3 Jun 1998	I receive an e-mail from foreign associate that Mr. Graham at EPO Receiving Section had requested WIPO to clarify the situation regarding dropping of the priority claim and indicating applicant would not be prejudiced while the priority question was open	J
1 Sept 1998	US/RO sends International Preliminary Examination report indicating US/RO still has the International Application as a pending case, and indicating novelty and inventive step and industrial applicability for all claims.	K
12 Oct 1998	I receive a FAX from foreign associate handling EPO case that WIPO indicated that PCT Rule 90bis.3(d) rendered the Chapter II demand too late it having been filed about one month after the 19 month deadline established by the dropped priority date. <b>However, the EPO, to avoid prejudice to applicants, decided to cancel the withdrawn status of the EPO regional case and give the applicants one additional month to pay the national stage fees and penalties to enter the EPO regional stage.</b>	L
14 Dec 1998	Letter to inventors Fuhrman (Exh M) and inventors Rakib and Azenkot (Exh N) forwarding copy of application to be filed, drawings and Declarations For Patent Application for signature	M, N
23 December 1998	Inventors Rakib and Azenkot report that their secretary has misplaced the Declaration For Patent Application they are supposed to sign and request that we FAX another copy. We FAX another copy. They sign and FAX back to us	Exh O last page
23 Dec 1998	U.S. national stage case filed with Declaration for patent application bearing faxed signature of inventors Rakib and Azenkot (Exh O) and filing fee of \$593 paid by check (Exh P) dropped in Express Mail on 12/23/98 (Exh Q) and received by USPTO on 23 Dec 1998 and assigned serial number 09/214158 (Exh R). Filing fee was never refunded by PTO	O, P, Q and R

19 Jan 1999	30 Month deadline to enter national stage after Chapter II International Preliminary Examination from new earliest of three priority dates (19 July 1996) established under PCT Article 39 after having dropped earliest priority date of 14 Mar 1996 under PCT Rule 90bis.3(a)	
3 Aug 1999	<b>USPTO treats national case as if it were not abandoned</b> and sends a NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 USC 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE indicating all necessary requirements except a Declaration that complies with 37 CFR1.497(a) have been received (including acknowledgement that the U.S. national stage filing fee had been received.)	S
12 Aug 1999	We file Petition under 37 CFR 1.47(a) to accept application without signature of inventor Fuhrmann	
8 Mar 2000	We receive Decision from USPTO PCT Legal Office that notifies us for the first time that the U.S. National Stage patent application was abandoned as of 15 Nov 1997 for failure to pay the basic national fee within 20 months from the earliest priority date. There is no acknowledgment that this priority date was dropped under PCT Rule 90bis.3(a). Decision further denies petition to accept application without signature of inventor Fuhrmann on grounds that application papers were not shown to have been sent to him.	
10 April 2000	Attorney Fish again attempts to obtain signature of inventor Fuhrmann by calling him and sending copy of U.S. national stage application including drawings and copy of declaration to sign to inventor Fuhrmann by registered mail (Exh T) - because of massive size of application, an actual copy of the application papers sent to Mr. Fuhrmann are not included herewith	T
23 April 2000	Inventor Fuhrmann never returned my phone call and never returned the signed declaration	u

## PATENT COOPERATION TREATY

(F)

PCT

From the INTERNATIONAL BUREAU

NOTIFICATION CONCERNING  
SUBMISSION OF PRIORITY DOCUMENTS

(PCT Administrative Instructions, Section 411)

To:

FISH, Ronald, Craig  
Falk & Fish  
16590 Oak View Circle  
Morgan Hill, CA 95037  
ETATS-UNIS D'AMERIQUE

Date of mailing (day/month/year)

22 May 1997 (22.05.97)

Applicant's or agent's file reference

TER-004.1P P

## IMPORTANT NOTIFICATION

International application No.

PCT/US97/03984

International filing date (day/month/year)

12 March 1997 (12.03.97)

Priority date (day/month/year)

14 March 1996 (14.03.96)

Applicant

TERAYON CORPORATION et al

The applicant is hereby notified of the date of receipt by the International Bureau of the priority document(s) relating to the following application(s):

Priority application No.:Priority date:Priority country:Date of receipt of priority document:

08/616,071

14 Mar 1996 (14.03.96)

US

15 May 1997 (15.05.97)

08/684,243

19 Jul 1996 (19.07.96)

US

15 May 1997 (15.05.97)

08/760,412

04 Dec 1996 (04.12.96)

US

15 May 1997 (15.05.97)

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

K. Andreasson

Telephone No.: (41-22) 730.91.11

Ex 4. A1

**FALK & FISH, LLP** A Texas Limited Liability Partnership

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INTELLECTUAL PROPERTY MATTERS

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ROBERT HARDY FALK, P.C.\*  
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ROBERT P. HOAG  
RICHARD V. PERSON, Resident Chemist

†CALIFORNIA AND TEXAS BAR  
\*TEXAS BAR

March 3, 1997

Mr. Shlomo Rakib  
**Terayon Corporation**  
2952 Bunker Hill Lane  
Santa Clara, California 95054

Re: **DATA TRANSMISSION USING ATM OVER HYBRID FIBER COAX**  
Inventor: Fuhrmann et al.  
International App. No.  
Intntl Filing Date:  
Patent No.  
Docket No. TER-004.1P P

Dear Shlomo:

Enclosed, please find a draft of the subject patent application and proposed drawings. I would like to file this next week. I am enclosing copies of the application and drawings for distribution to Yehuda and Amir. Please instruct them to mark up their copies with any changes they would like to make and return the markups to me with the changes you would like to make, if any.

With kindest regards,  
**FALK & FISH LLP**



Ronald Craig Fish

cc: Yehuda Azenkot  
Amir Fuhrmann

ExH. B1

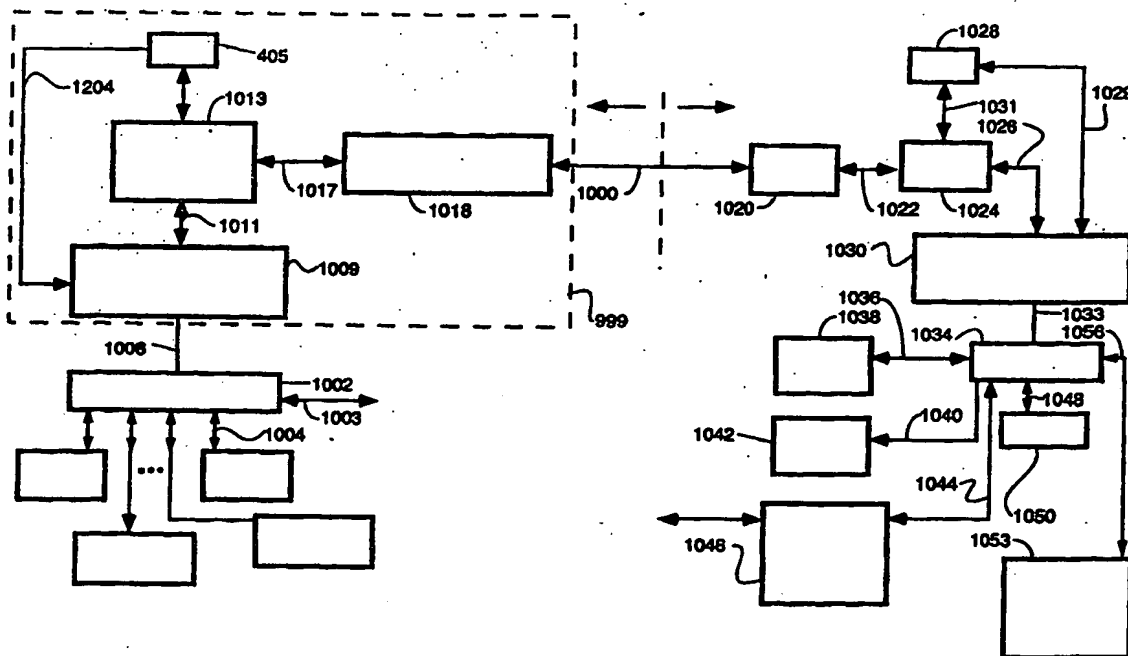
**PRIVILEGED AND CONFIDENTIAL  
ATTORNEY-CLIENT COMMUNICATION**



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>6</sup> : <b>H04N 7/173, H04J 3/16, H04L 12/56</b>		<b>A1</b>	(11) International Publication Number: <b>WO 97/34421</b>
		(43) International Publication Date: 18 September 1997 (18.09.97)	
(21) International Application Number: <b>PCT/US97/03984</b>		(81) Designated States: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).	
(22) International Filing Date: 12 March 1997 (12.03.97)		<b>Published</b> <i>With international search report.</i>	
(30) Priority Data: 08/616,071 <i>TE2-cc4</i> 14 March 1996 (14.03.96) US 08/684,243 <i>co2-zp</i> 19 July 1996 (19.07.96) US 08/760,412 <i>co4-1p</i> 4 December 1996 (04.12.96) US			
(71) Applicant (for all designated States except US): <b>TERAYON CORPORATION [US/US]; 2952 Bunker Hill Lane, Santa Clara, CA 95054 (US).</b>			
(72) Inventors; and (75) Inventors/Applicants (for US only): <b>FUHRMANN, Amir, Michael [US/US]; 444 Saratoga Avenue #15G, Santa Clara, CA 95050 (US). RAKIB, Selim, Shlomo [US/US]; 23057 Cricket Hill Road, Cupertino, CA 95014 (US). AZENKOT, Yehuda [US/US]; 19400 Sorenson Avenue #128, Cupertino, CA 95014 (US).</b>			
(74) Agent: <b>FISH, Ronald, Craig; Falk &amp; Fish, 16590 Oak View Circle, Morgan Hill, CA 95037 (US).</b>			

(54) Title: DATA TRANSMISSION USING ATM OVER HYBRID FIBER COAX



## (57) Abstract

A process for reducing the amount of overhead data in ATM cell header prior to transmission upstream and downstream on a hybrid fiber coax cable plant (1003) or other transmission media using SCDMA on at least the upstream path, with out loss of either IP or Ethernet addressing information. Optimized downstream communication is achieved by establishing a virtual link between each remote unit an a central unit using dedicated SCDMA spreading codes assigned only to that virtual link.



The demand must be filed directly with the competent International Preliminary Examining Authority or, if two or more Authorities are competent, with the one chosen by the applicant. The full name or two-letter code of that Authority may be indicated by the applicant on the line below:

IPEA/ US

# PCT

## CHAPTER II

### DEMAND

under Article 31 of the Patent Cooperation Treaty:  
The undersigned requests that the international application specified below be the subject of international preliminary examination according to the Patent Cooperation Treaty.

For International Preliminary Examining Authority use only			
Identification of IPEA		Date of receipt of DEMAND	
<b>Box No. I IDENTIFICATION OF THE INTERNATIONAL APPLICATION</b>		Applicant's or agent's file reference TER-004.1P P	
International application No. PCT/US97/03984	International filing date (day/month/year) 12 March 1997 (12-03-97)	(Earliest) Priority date (day/month/year) 19 July 1996 (19-07-96)	
Title of invention DATA TRANSMISSION USING ATM OVER HYBRID FIBER COAX			
<b>Box No. II APPLICANT(S)</b>			
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)  TERAYON CORPORATION 2952 Bunker Hill Lane Santa Clara, California 95054		Telephone No.: 408 727 4400	
		Facsimile No.: 408 727 6205	
		Teleprinter No.:	
State (i.e. country) of nationality: US		State (i.e. country) of residence: US	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)  FUHRMANN, AMIR MICHAEL 444 Saratoga Avenue, #15G Santa Clara, California 95050			
State (i.e. country) of nationality: US		State (i.e. country) of residence: US	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)  RAKIB, SELIM SHLOMO 23057 Cricket Hill Road Cupertino, California 95014			
State (i.e. country) of nationality: US		State (i.e. country) of residence: US	
<input checked="" type="checkbox"/> Further applicants are indicated on a continuation sheet.			

## Continuation of Box No. II APPLICANT(S)

*If none of the following sub-boxes is used, this sheet is not to be included in the demand.*

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*

AZENKOT, YEHUDA  
19400 Sorenson Avenue, #128  
Cupertino, California 95014

State (i.e. country) of nationality:  
US

State (i.e. country) of residence:  
US

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*

State (i.e. country) of nationality:

State (i.e. country) of residence:

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*

State (i.e. country) of nationality:

State (i.e. country) of residence:

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*

State (i.e. country) of nationality:

State (i.e. country) of residence:

☐

Further applicants are indicated on another continuation sheet.

**Box No. III AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE**

The following person is ☒ agent ☐ common representative  
 and ☒ has been appointed earlier and represents the applicant(s) also for international preliminary examination.  
☐ is hereby appointed and any earlier appointment of (an) agent(s) /common representative is hereby revoked.  
☐ is hereby appointed, specifically for the procedure before the International Preliminary Examining Authority, in addition to the agent(s)/common representative appointed earlier.

Name and address: *(Family name followed by given name; for a legal entity, full official designation.)*  
*The address must include postal code and name of country.)*

RONALD CRAIG FISH  
 Falk & Fish, LLP  
 16590 Oak View Circle  
 Morgan Hill, California 95037

Telephone No.:

408 778 3624

Facsimile No.:

408 776 0426

Teleprinter No.:

☐ Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

**Box No. IV STATEMENT CONCERNING AMENDMENTS**

The applicant wishes the International Preliminary Examining Authority\*

- (i) ☒ to start the international preliminary examination on the basis of the international application as originally filed.
- (ii) ☐ to take into account the amendments under Article 34 of
- ☐ the description (amendments attached).
  - ☐ the claims (amendments attached).
  - ☐ the drawings (amendments attached).
- (iii) ☐ to take into account any amendments of the claims under Article 19 filed with the International Bureau (a copy is attached).
- (iv) ☐ to disregard any amendments of the claims made under Article 19 and to consider them as reversed.
- (v) ☐ to postpone the start of the international preliminary examination until the expiration of 20 months from the priority date unless that Authority receives a copy of any amendments made under Article 19 or a notice from the applicant that he does not wish to make such amendments (Rule 69.1(d)). *(This check-box may be marked only where the time limit under Article 19 has not yet expired.)*

\* Where no check-box is marked, international preliminary examination will start on the basis of the international application as originally filed or, where a copy of amendments to the claims under Article 19 and/or amendments of the international application under Article 34 are received by the International Preliminary Examining Authority before it has begun to draw up a written opinion or the international preliminary examination report, as so amended.

**Box No. V ELECTION OF STATES**

The applicant hereby elects all eligible States *(that is, all States which have been designated and which are bound by Chapter II of the PCT)* except.....

.....

.....

*(If the applicant does not wish to elect certain eligible States, the name(s) or country code(s) of those States must be indicated above.)*

**Box No. VI CHECK LIST**

The demand is accompanied by the following documents for the purposes of international preliminary examination:

- |  |   |          |
|--|---|----------|
| 1. amendments under Article 34                     |   |          |
| description  | : | 0 sheets |
| claims   | : | 0 sheets |
| drawings   | : | 0 sheets |
| 2. letter accompanying amendments under Article 34 | : | 0 sheets |
| 3. copy of amendments under Article 19             | : | 0 sheets |
| 4. copy of statement under Article 19              | : | 0 sheets |
| 5. other ( <i>specify</i> ):                       | : | 0 sheets |

For International Preliminary Examining Authority use only

received                      not received

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

The demand is also accompanied by the item(s) marked below:

- |  |  |
|--|--|
| 1. <input type="checkbox"/> separate signed power of attorney      | 4. <input checked="" type="checkbox"/> fee calculation sheet |
| 2. <input type="checkbox"/> copy of general power of attorney      | 5. <input type="checkbox"/> other ( <i>specify</i> ):        |
| 3. <input type="checkbox"/> statement explaining lack of signature |  |

**Box No. VII SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE**

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the demand).

Ronald C. Fish, AGENT 12 NOVEMBER 1997 DATE  
RONALD CRAIG FISH

EF732067731US

For International Preliminary Examining Authority use only

- Date of actual receipt of DEMAND:
- Adjusted date of receipt of demand due to CORRECTIONS under Rule 60.1(b):
- ☐ The date of receipt of the demand is AFTER the expiration of 19 months from the priority date and item 4 or 5, below, does not apply.
 ☐ The applicant has been informed accordingly.
- ☐ The date of receipt of the demand is WITHIN the period of 19 months from the priority date as extended by virtue of Rule 80.5.
- ☐ Although the date of receipt of the demand is after the expiration of 19 months from the priority date, the delay in arrival is EXCUSED pursuant to Rule 82.


For International Bureau use only

Demand received from IPEA on:

## PCT

## FEE CALCULATION SHEET

## Annex to the Demand for international preliminary examination

International application No. <b>PCT/US97/03984</b>	For International Preliminary Examining Authority use only	
Applicant's or agent's file reference <b>TER-004.1P P</b>	Date stamp of the IPEA	
Applicant <b>TERAYON CORPORATION</b>		
<b>Calculation of prescribed fees</b>  1. Preliminary examination fee ..... <b>490.00</b> <span style="border: 1px solid black; padding: 0 5px;">P</span>  2. Handling fee <i>(Applicants from certain States are entitled to a reduction of 75% of the handling fee. Where the applicant is (or all applicants are) so entitled, the amount to be entered at H is 25% of the handling fee.)</i> ..... <b>162.00</b> <span style="border: 1px solid black; padding: 0 5px;">H</span>  3. Total of prescribed fees Add the amounts entered at P and H and enter total in the TOTAL box ..... <b>652.00</b> <div style="border: 1px solid black; width: 100px; margin: 0 auto; text-align: center; padding: 2px;"><b>TOTAL</b></div>		
<b>Mode of Payment</b>  <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> authorization to charge deposit account with the IPEA (see below)           </div> <div style="width: 45%;"> <input type="checkbox"/> cash           </div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="checkbox"/> cheque           </div> <div style="width: 45%;"> <input type="checkbox"/> revenue stamps           </div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> postal money order           </div> <div style="width: 45%;"> <input type="checkbox"/> coupons           </div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> bank draft           </div> <div style="width: 45%;"> <input type="checkbox"/> other (specify):           </div> </div>		
<b>Deposit Account Authorization</b> <i>(this mode of payment may not be available at all IPEAs)</i>  The IPEA/ <u>US</u> <input type="checkbox"/> is hereby authorized to charge the total fees indicated above to my deposit account.  <input checked="" type="checkbox"/> <i>(this check-box may be marked only if the conditions for deposit accounts of the IPEA so permit)</i> is hereby authorized to charge any deficiency or credit any overpayment in the total fees indicated above to my deposit account.		
<b>06-0932</b> Deposit Account Number	<b>12 NOVEMBER 1997</b> Date (day/month/year)	 Signature

**FALK & FISH, LLP** A Texas Limited Liability Partnership

COUNSELORS AT LAW  
INTELLECTUAL PROPERTY MATTERS

16590 OAK VIEW CIRCLE  
MORGAN HILL, CALIFORNIA 95037  
TEL: (408) 778-3624  
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RONFPATENTS@WORLDNET.ATT.NET  
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ROBERT HARDY FALK, P.C.\*  
RONALD CRAIG FISH, P.C.†  
G. BYRON JAMISON

ROBERT P. HOAG  
RICHARD V. PERSON, Resident Chemist

†CALIFORNIA AND TEXAS BAR  
\*TEXAS BAR

November 12, 1997

FAX 703 305-3230

Commissioner of Patents and Trademarks  
United State Receiving Office  
PCT Examination Section  
Washington, D.C. 20231

**FAXED**  
11/12/97  
R.C.F.

Re: **DATA TRANSMISSION USING ATM OVER HYBRID FIBER COAX**  
Inventor: Fuhrmann et al.  
International App. No. PCT/US97/03984  
Intnl Filing Date: 12 March 1997  
Patent No.  
Docket No. TER-004.1P P

Dear Sirs:

I am agent of record on the subject case for applicant Terayon Corporation et al.. The subject PCT case was filed claiming priority of three prior U.S. cases. The applicant hereby notifies the United States Receiving Office that under PCT Rule 90bis.3, that the priority claim to application serial number 08/616,071, filed 14 March 1996 is hereby withdrawn. The earliest priority date is now 19 July 1996.

Enclosed is a Chapter II demand form reflecting this change and a check for \$652 and a return receipt postcard.

With kindest regards,  
**RONALD CRAIG FISH, A LAW CORPORATION**

*Ron*

Ronald Craig Fish

EXH. A TO EPO

EXH. D TO PCT LEGAL OFFICE

Please acknowledge receipt of the following by affixing heron the  
Patent Office date stamp and returning this card to our office.

Inventors Amir Fuhrmann, Selim Shlomo Rakib, Yehuda Azenkot

PCT International Application No. PCT/US97/03984

PCT International Filing Date 12 March 1997

Title LOWER OVERHEAD METHOD FOR DATA TRANSMISSION USING ATM AND SCDDMA

Attorney: RONALD CRAIG FISH

Docket No. TER-004.1P P

Today's Date: 12 NOVEMBER 1997

Papers Filed:

1. Transmittal Letter to USPTO
2. Check in the amount of \$652.00
3. PCT Chapter II Demand (4 pages)
4. PCT Chapter II Fee Calculation Sheet
5. Return Post Card

**Rec'd PCT/PTO 12 NOV 1997**

EXH. B TO FAX TO ARAS AT EPD  
EXH. E TO PCT LEGAL OFFICE

RONALD CRAIG FISH, A LAW CORP.

16590 OAK VIEW CIRCLE  
MORGAN HILL, CA 95037  
(408) 778-3624 FAX (408) 776-0426

BANK OF AMERICA  
SAN JOSE, CA 95159  
11-35/1210 - 157

3826

11/12/97

PAY TO THE ORDER OF UNITED STATES PATENT AND TRADEMARK OFFICE

\$ \*\*\*\*\*652.00

Six hundred fifty-two and 00/100\*\*\*\*\*

USPTO  
WASHINGTON, D.C. 20231

DOLLARS

Security features included.  
Details on back.

MEMO CHAP II DEM TER-4.1P P



⑈003826⑈ ⑆121000358⑆ 01578⑈09525⑈

RONALD CRAIG FISH, A LAW CORP.

3826

Account: LawCrp-BofA Ckg  
Date: 11/12/97  
Payee: UNITED STATES PATENT AND TRADEMARK OFFICE  
Amount: 652.00  
Memo: CHAP II DEM TER-4.1P P

430-CI Cost Adv

652.00

RONALD CRAIG FISH, A LAW CORP.

3826

Account: LawCrp-BofA Ckg  
Date: 11/12/97  
Payee: UNITED STATES PATENT AND TRADEMARK OFFICE  
Amount: 652.00  
Memo: CHAP II DEM TER-4.1P P

430-CI Cost Adv

652.00

PAYMENT  
RECORD

EXH. F





P.B.5818 - Patentlaan 2  
2280 HV Rijswijk (ZH)  
☎ (070) 3 40 20 40  
TX 31651 epo nl  
FAX (070) 3 40 30 16

Europäisches  
Patentamt

Eingangs-  
stelle

European  
Patent Office

Receiving  
Section

Office européen  
des brevets

Section de  
Dépôt

31 counter  
code

FISH, Ronald, Craig  
Falk & Fish  
16590 Oak View Circle  
Morgan Hill, CA 95037  
ETATS-UNIS D'AMERIQUE



Datum/Date

11. 05. 98

Zeichen/Ref./Réf.	Anmeldung Nr./Application No./Demande n°/Patent Nr./Patent No./Brevet n°. 97915064.6-2202- PCT/US9703984
Anmelder/Applicant/Demandeur/Patentinhaber/Propriétaire/Titulaire Terayon Corporation	

C O P Y FOR INFORMATION (CF. IMPORTANT INFORMATION ON FOLLOWING PAGE)!

COMMUNICATION PURSUANT TO RULE 85a(1) EPC

☒ The national basic fee ☒ The search fee

☒ The designation fee(s) (for)  
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

has (have) not been paid within the time limit laid down in Rule 104b(1) EPC.

You can still validly pay the fee(s) within a period of grace of ONE MONTH of notification of this communication, together with a surcharge of 50% (Rule 85a(1) EPC). The surcharge is limited to a maximum of DEM 1400.-- (Art. 2 item 3b Rules relating to Fees) or its equivalents. See the enclosed List of Fees for fee rates in the currencies of all the contracting states.

If the fee(s) with surcharge has (have) not been paid in due time, then, in accordance with Rule 69(1) EPC, you will be informed that

☒ the application is deemed to be withdrawn.  
☐ the designation of the above-mentioned contracting state(s) is deemed to be withdrawn.

RECEIVING SECTION

C. ARAS

NOTE ON NOTIFICATION:

Notification of this communication shall be deemed to have been made when despatch has taken place (Rule 78(2) EPC). The date of despatch is as indicated in the document heading.

--/2



**IMPORTANT INFORMATION:**

The European Patent Office (EPO) is acting as designated/elected Office for the above-referenced international application (Arts. 153 or 156 EPC). Since no professional representative entitled to practise before the EPO has been appointed so far (Art. 133(2) EPC), the present communication is being sent to the APPLICANT direct (see also note on notification).

If an international representative was appointed for the international application, a copy of the present communication is sent to him for information.

If the present communication is despatched upon expiration of 21 months from the priority date, while the international preliminary examination under PCT Chapter II has been requested within the prescribed time limit and EP has been elected, thereby extending the time limit for entry into the regional phase before the EPO to 31 months, applicants are invited to inform the EPO immediately (see OJ EPO 1992, 245).

Encl.: List of fees

**FALK & FISH, LLP** A Texas Limited Liability Partnership

COUNSELORS AT LAW  
INTELLECTUAL PROPERTY MATTERS

16590 OAK VIEW CIRCLE  
MORGAN HILL, CALIFORNIA 95037  
TEL: (408) 778-3624  
FAX: (408) 776-0426  
internet e-mail:  
RONFPATENTS@WORLDNET.ATT.NET  
HTTP://WWW.PATENT.NET

ROBERT HARDY FALK, P.C.\*  
RONALD CRAIG FISH, P.C.†  
G. BYRON JAMISON

ROBERT P. HOAG  
RICHARD V. PERSON, Resident Chemist

†CALIFORNIA AND TEXAS BAR  
\*TEXAS BAR

May 15, 1998

<sup>31</sup>  
FAX 011 <sup>31</sup>070 3 40 30 16

C. Aras

European Patent Office  
Receiving Section  
P.B. 5818 - Patentlaan 2  
2280 HV Rijswijk (ZH)

**FAXED**  
MAY 15, 98

Re: **DATA TRANSMISSION USING ATM OVER HYBRID FIBER COAX**

Inventor: Fuhrmann et al.  
EPO Serial No. 97915064.6-2202  
International App. No. PCT/US97/03984  
Intnl Filing Date: 12 March 1997  
Patent No.  
Docket No. TER-004.1P EP

Dear Mr. or Ms. Aras:

Thank you for your EPO For 1217NC and 1218NC communications mailed 11 May 98 indicating the subject case has been withdrawn. I believe these communications were mistakenly sent based upon the fact that formerly, the earliest priority date claimed in the subject case was 14 March 1996. That earliest priority date was withdrawn by a FAXed letter (Exhibit A attached) dated November 12, 1997 which I FAXed under Rule 90bis.3 to the United States Receiving Office on 12 November 97. On 12 November 97, we also filed a Chapter II demand by Express Mail, which was received by the United States Receiving Office on 12 November 1997 per Exhibit B attached. The new earliest priority date, after the subject withdrawal, is 19 July 96. Under Chapter II proceedings, this makes the deadline for entry into the regional phase in the EPO 19 Jan 99 (30 mos) or 19 Feb 99 if the 31 month time limit is used to its fullest. Please

Ex H. H

European Patent Office  
Receiving Section  
May 15, 1998  
Page 2

confirm by return FAX that you have received this FAX and that the case has been removed from withdrawn status.

With kindest regards,  
**RONALD CRAIG FISH, A LAW CORPORATION**

  
Ronald Craig Fish

ENCL Exh. A & B

**Subject:** EPO regional of the PCT will be OK

**Date:** Thu, 28 May 98 15:24:27 +0300

**From:** Matti.Brax@berggren.elisa.fi

**To:** ronfpatents@worldnet.att.net

Dear Ron,

I reached today the EPO official taking care of your EP regional application related to TER-004.1P P at the EPO Receiving Section. He was very friendly and cooperative and told me that there is usually a long delay in forwarding even urgent and important information from the USPTO to the WIPO and further to the EPO. In this case the information about the earliest priority having been dropped is obviously still hovering somewhere between the relevant authorities.

There should be no problem in correcting the situation. I will write immediately to the EPO and enclose a copy of your original letter to the USPTO where you withdraw the claim to the earliest priority. EPO will then try to check through the WIPO why was the information not received in time. As it now seems, the rights of your client are in no danger of being adversely affected.

Matti Brax

EXH. I

**Subject:** EPO confirms no loss of rights in priority question

**Date:** Wed, 3 Jun 98 13:11:43 +0300

**From:** Matti.Brax@berggren.elisa.fi

**To:** ronfpatents@worldnet.att.net

PCT APPLICATION US97/03984

EPO REGIONAL PHASE AS 97915064.6

Hello Ron,

I have today received a fax from a Mr. Malcolm Graham at the EPO Receiving Section, confirming it in writing that the EPO has requested WIPO to clarify the situation regarding the priority claim of the above-mentioned application. This is the TER one where the earliest priority had been dropped to postpone the PCT deadlines, which information had not reached EPO in time. Citing Mr. Graham: "The applicant will suffer no disadvantage while the priority question remains open".

Matti Brax

ExH. J

06/04/98 08:16:4

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To: RONALD CRAIG FISH  
FALK & FISH  
16590 OAK VIEW CIRCLE  
MORGAN HILL, CA 95037

## PCT

### NOTIFICATION OF TRANSMITTAL OF INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Date of Mailing  
(day/month/year)

**01 SEP 1998**

Applicant's or agent's file reference

TER-004.IP P

#### IMPORTANT NOTIFICATION

International application No.

PCT/US97/03984

International filing date (day/month/year)

12 MARCH 1997

Priority Date (day/month/year)

14 MARCH 1996

Applicant

TERAYON CORPORATION

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices)(Article 39(1))(see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/US

Commissioner of Patents and Trademarks  
Box PCT  
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

NATHAN J. FLYNN

Telephone No. (703) 308-6601

EXH. K

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference TER-004.IP P	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US97/03984	International filing date (day/month/year) 12 MARCH 1997	Priority date (day/month/year) 14 MARCH 1996
International Patent Classification (IPC) or national classification and IPC Please See Supplemental Sheet.		
Applicant TERAYON CORPORATION		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

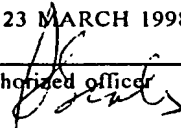
2. This REPORT consists of a total of 4 sheets.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of      sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of report with regard to novelty, inventive step or industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand  12 NOVEMBER 1997	Date of completion of this report  23 MARCH 1998
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Authorized officer  NATHAN J. FLYNN
Facsimile No. (703) 305-3230	Telephone No. (703) 308-6601



## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US97/03984

**I. Basis of the report**

1. This report has been drawn on the basis of *(Substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments):*

☒ the international application as originally filed.

☒ the description, pages 1-121, as originally filed.

pages NONE, filed with the demand.

pages NONE, filed with the letter of \_\_\_\_\_.

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

☒ the claims, Nos. 1-30, as originally filed.

Nos. NONE, as amended under Article 19.

Nos. NONE, filed with the demand.

Nos. NONE, filed with the letter of \_\_\_\_\_.

Nos. \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

☒ the drawings, sheets/fig 1-45, as originally filed.

sheets/fig NONE, filed with the demand.

sheets/fig NONE, filed with the letter of \_\_\_\_\_.

sheets/fig \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

2. The amendments have resulted in the cancellation of:

☒ the description, pages none.

☒ the claims, Nos. none.

☒ the drawings, sheets/fig 1-45.

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the ~~Supplemental Box~~ Additional observations below (Rule 70.2(c)).

4. Additional observations, if necessary:

NONE

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US97/03984

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. STATEMENT**

Novelty (N)	Claims <u>1-30</u>	YES
	Claims <u>none</u>	NO
Inventive Step (IS)	Claims <u>1-30</u>	YES
	Claims <u>none</u>	NO
Industrial Applicability (IA)	Claims <u>1-30</u>	YES
	Claims <u>none</u>	NO

**2. CITATIONS AND EXPLANATIONS**

Claims 1-30 meet the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest the construction of a AMT cable system which operates in the manner now claimed.

----- NEW CITATIONS -----

NONE

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US97/03984

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 10

**CLASSIFICATION:**

The International Patent Classification (IPC) and/or the National classification are as listed below:

IPC(6): H04N 7/173; H04J 3/16; H04L 12/56 and US Cl.: 348/ 6, 7, 13, 14, 15, 16, 17; 455/ 3.1, 4.1, 4.2, 6.1, 6.2, 6.3;  
375/395-399, 905, 369, 370  
395/ 200.01-200.018

12 October 1998

• PATENTIT,  
HYÖDYLLISYYSMALLIT:  
• PATENTS,  
UTILITY MODELS:

J. Kupiainen\*  
M. Brax\*  
E. Helkkinen\*  
P. Hiltunen\*  
T. Laako\*  
B. Lassenius\*  
M. Lehtinen\*  
T. Peltinen\*  
I. Rasku\*  
O-P. Salonen\*  
J. Svanberg\*  
P. Tammela\*  
B. Törmä\*  
P. Ojanen

Falk & Fish, LLP  
Counsellors at Law  
16590 Oak View Circle  
Morgan Hill, CA 95037  
U.S.A.

**FACSIMILE (7 pages)**  
999-1-408-7760426

**URGENT!**

Attn: Mr. Ron Fish

Your ref: TER-004.1P EP  
Our ref: MB/RKM/TIK

**EURO-PCT APPLICATION NUMBER 97915064.6-2202 (PCT/US97/03984)**  
**APPLICANT: TERAYON CORPORATION**

• MALLIT:  
• DESIGNS:  
L. Valjakka

• TAVARAMERKIT,  
LAKIABIT:  
• TRADEMARKS,  
LEGAL MATTERS:

P. Korte\*  
S. Henn\*  
I. Karlsson\*  
H. Halmola\*  
J. Taitto

Dear Mr. Fish,

We have both bad news and good news concerning the above-identified EP continuation of a PCT application of yours. The bad news is that the withdrawal of the earliest priority, which was made in order to postpone the time limit for entering the national/regional stage, has not been duly executed and is therefore void! In the enclosed communication an authorized officer of WIPO explains that the time limit for validly filing the demand had already expired when you filed the withdrawal, meaning that the withdrawal could not be taken into account under Rule 90bis.3(d) of PCT.

The good news is that the EP case is still not lost. The EPO will give you a one month's grace period, starting from 7 October 1998, for entering the EP regional stage by paying the basic fee, the search fee, the designation fees and a surcharge of DEM 1400. Additional good news is of course that according to our understanding your earliest priority date will hold.

If the fees are not paid within the grace period, the EP application will be deemed to be withdrawn with no chances of re-establishing any rights. Please inform us at your earliest convenience and in any case before 7 November 1998, whether or not you want us to pay the fees in order to keep the application alive.

Yours very truly,  
**BERGGREN OY AB**  
for Matti Brax

  
Riitta Keski-Marttunen  
Patent Assistant

Encls.

**Berggren Oy Ab**

Osasto • Address:  
PL 18 • P.O.Box 18  
FIN-00101 Helsinki  
FINLAND

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Fax +358-9-693 3844



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P=berggren; A=elisa; C=fi  
email.box@berggren.elisa.fi  
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\* Representatives before the EPO  
\*\* Representatives before the OHIM

EXH. L (5 PAGES)

12 October 1998

Falk & Fish, LLP  
Counsellors at Law  
16590 Oak View Circle  
Morgan Hill, CA 95037  
U.S.A.

**FACSIMILE (7 pages)**  
999-1-408-7760426

**URGENT!**

Attn: Mr. Ron Fish

Your ref: TER-004.1P EP  
Our ref: MB/RKM/TIK

**EURO-PCT APPLICATION NUMBER 97915064.6-2202 (PCT/US97/03984)**  
**APPLICANT: TERAYON CORPORATION**

Dear Mr. Fish,

We have both bad news and good news concerning the above-identified EP continuation of a PCT application of yours. The bad news is that the withdrawal of the earliest priority, which was made in order to postpone the time limit for entering the national/regional stage, has not been duly executed and is therefore void! In the enclosed communication an authorized officer of WIPO explains that the time limit for validly filing the demand had already expired when you filed the withdrawal, meaning that the withdrawal could not be taken into account under Rule 90bis 3(d) of PCT.

The good news is that the EP case is still not lost. The EPO will give you a one month's grace period, starting from 7 October 1998, for entering the EP regional stage by paying the basic fee, the search fee, the designation fees and a surcharge of DEM 1400. Additional good news is of course that according to our understanding your earliest priority date will hold.

If the fees are not paid within the grace period, the EP application will be deemed to be withdrawn with no chances of re-establishing any rights. Please inform us at your earliest convenience and in any case before 7 November 1998, whether or not you want us to pay the fees in order to keep the application alive.

Yours very truly,  
**BERGGREN OY AB**  
for Matti Brax

  
Riitta Keski-Marttunen  
Patent Assistant

Encls.

**Berggren Oy Ab**

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P=berggren; A=elisa; C=fi  
email.box@berggren.elisa.fi  
http://www.berggren.fi

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Member  
of the European Patent Office  
in Proprietary Industrial  
rights 80.802

\* Representatives before the EPO  
\*\* Representatives before the OHIM



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2280 HV Rijswijk (ZH)  
☎ (070) 3 40 20 40  
Tx 31651 epo nl  
FAX (070) 3 40 30 16

Europäisches  
Patentamt

European  
Patent Office

Office européen  
des brevets

Eingangsstelle

Receiving Section

Section de dépôt

Brax, Matti Juhani  
Berggren Oy Ab,  
P.O. Box 16  
00101 Helsinki  
FINLANDE

*Berggren Oy Ab*

12 -10- 1998

Datum/Date

07. 10. 98

Zeichen/Ref./Réf.

MB/AH/TIK

Anmeldung Nr./Application No./Demande n°./Patent Nr./Patent No./Brevet n°

97915064.6-2202/US9703984

Anmelder/Applicant/Demandeur/Patentinhaber/Proprietor/Titulaire

Terayon Corporation

We refer once again to your letter of 29.05.1998 and confirm that a withdrawal of the earliest priority claim in this application would not in fact have had the effect of changing the time limit date for entering the regional phase. In connection with this, please see the copies of WIPO notifications (PCT/IB/331 dated 10.06.98 and PCT/IB/345 dated 21.09.98) attached. Because the matter has taken so long to clarify and in order not to unfairly penalise the applicant, we hereby cancel our original communications pursuant to Rule 85a and Rule 85b EPC dated 11.05.98 and replace them with fresh forms 1217 and 1218 both dating from 07.10.98, and setting a time limit of one month pursuant to Rules 85a and 85b EPC for payment of the due fees plus penalty fees.

Receiving Section

*M.W. Graham*

M.W.GRAHAM

*Enclosures*

*Registered Letter*

## PARENT COOPERATION TREATY

EPO - DG 1

From the INTERNATIONAL BUREAU

PCT 30.09.1998

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

Date of mailing (day/month/year) 10 June 1998 (10.06.98)		To:  EP  In its capacity as elected Office
International application No. PCT/US97/03984	Applicant's or agent's file reference TER-004.1P P	
International filing date (day/month/year) 12 March 1997 (12.03.97)	Priority date (day/month/year) 14 March 1996 (14.03.96)	
Applicant		

1. The designated Office is hereby notified of its election made:

☒ In the demand filed with the International Preliminary Examining Authority on:  
12 November 1997 (12.11.97)

☐ In a notice effecting later election filed with the International Bureau on:  
\_\_\_\_\_

2. The election ☐ was  
☒ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer P. Regis Telephone No.: (41-22) 338.83.38
---	--

## PATENT COOPERATION TREATY

EPO - DG 1

From the INTERNATIONAL BUREAU

**PCT** 30.09.1998COMMUNICATION IN CASES FOR WHICH  
NO OTHER FORM IS APPLICABLE

To:

European Patent Office  
Postbus 5818  
Patentlaan 2  
NL-2280 HV Rijswijk  
PAYS-BAS

attention: C. ARAS

Date of mailing (day/month/year) 21 September 1998 (21.09.1998)	
Applicant's or agent's file reference TER-004.1P P	REPLY DUE see paragraph 1 below
International application No. PCT/US97/03984	International filing date (day/month/year) 12 March 1997 (12.03.1997)
Applicant TERAYON CORPORATION	

1. ☐ REPLY DUE within \_\_\_\_\_ months/days from the above date of mailing☐ NO REPLY DUE, however, see below \_\_\_\_\_☒ IMPORTANT COMMUNICATION☐ INFORMATION ONLY

## 2. COMMUNICATION:

Following our telephone conversation, please find hereafter copy of form PCT/IB/331 as well as a copy of the IPER.

Please note that the International Bureau has no record on file (neither from the receiving Office (RO/US) nor from the applicant) pertaining to the withdrawal of a priority claim under Rule 90bis.3.

However, it seems from the copies you mailed us that the applicant sent such a withdrawal to RO/US on 12 November 1997, which was the date of filing the demand. While such a withdrawal was made within the time limit fixed in Rule 90bis.3(a), it was however made too late for a timely filing of a demand under Chapter II (see Rule 90bis.3(d) "Where the withdrawal of a priority claim causes a change in the priority date, any time limit which is computed from the original priority date and which has not yet expired shall, ..." The time limit for validly filing a demand under Chapter II had expired on 14 October

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Beate Giffo-Schmitt
Facsimile No. (41-22) 740.14.35	Telephone No. (41-22) 338.83.38



P.B.5818 - Patentlaan 2  
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E (070) 3 40 20-40  
TX 31651 epo nl  
FAX (070) 3 40 20 18

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Patentamt

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European  
Patent Office

Receiving  
Section

Office européen  
des brevets

Section de  
Dépôt

Brax, Matti Juhani  
Berggren Oy Ab,  
P.O. Box 16  
00101 Helsinki  
FINLANDE



Datum/Date

07.10.98

Zeichen/Ref./Réf. <b>MB/AH/TIK</b>	Anmeldung Nr./Application No./Demande n°/Patent Nr./Brevet n°. <b>97915064.6-2202- PCT/US9703984</b>
Anmelder/Applicant/Demandeur/Patentinhaber/Propriétaire/Titulaire <b>Terayon Corporation</b>	

COMMUNICATION PURSUANT TO RULE 85a(1) EPC

☒ The national basic fee ☒ The search fee

☒ The (All) designation fee(s) (for)  
AT BE CH LI DE DK ES FI FR GB GR IE IT LU MC NL PT SE

has (have) not been paid within the time limit laid down in Rule 104b(1) EPC. The fee(s) may still be validly paid within a period of grace of ONE MONTH of notification of this communication, together with a surcharge of 50% (Rule 85a(1) EPC). The surcharge is limited to a maximum of DEM 1400.-- (Art. 2 item 3b Rules relating to Fees) or its equivalents. See the enclosed List of Fees for fee rates in the currencies of all the contracting states.

If the fee(s) with surcharge has (have) not been paid in due time, you will be informed, in accordance with Rule 69(1) EPC, that

- ☒ the application is deemed to be withdrawn.  
( ) the designation of the above-mentioned contracting state(s) is deemed to be withdrawn.

☒ The applicant may not be re-established in his rights.

NOTE:

If the present communication is despatched upon expiration of 21 months from the priority date, while the international preliminary examination under PCT Chapter II has been requested within the prescribed time limit and EP has been elected, thereby extending the time limit for entry into the regional phase before the EPO to 31 months, applicants are invited to inform the EPO immediately (see OJ EPO 1992, 245).

RECEIVING SECTION

*[Signature]*

Encl.: List of fees

REGISTERED LETTER

7006053 02/10/98

EPO Form 1217 (08.98)  
LU MC NL PT SE

cc= AT BE CH LI DE DK ES FI FR GB GR IE IT

97915064.6 PFEE  
PFEE  
PFEE

FFEE\*  
SFEE\*  
DESTcc\*

\*M01\*  
\*M01\*  
\*M01\* 009



P.B.5818 - Patentaan 2  
2280 HV Rijswijk (ZH)  
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TX 31651 epo nl  
FAX (070) 3 40 30 16

Europäisches  
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des brevets

Section de  
Dépôt

Brax, Matti Juhani  
Berggren Oy Ab,  
P.O. Box 16  
00101 Helsinki  
FINLANDE



Datum/Date

07.10.98

Zeichen/Ref./Réf.

MB/AH/TIK

Anmeldung Nr./Application No./Demande n°/Patent Nr./Patent No./Brevet n°.

97915064.6-2202- PCT/US9703984

Anmelder/Applicant/Demandeur/Patentinhaber/Propriétaire/Titulaire

Terayon Corporation

# COMMUNICATION PURSUANT TO RULE 85b EPC

In the above-mentioned application, a valid request for examination has not been made within the period laid down in Article 150(2) EPC in conjunction with Rule 104b(1)(d) EPC. The request for examination entails a written request and the payment of the examination fee.

The following deficiency has been noted:

A written request for examination

( ) has been filed, but not within the above-mentioned period.

☒ has not been filed.

The examination fee

( ) has not been paid in the full amount; still missing is .....

☒ has not been paid.

The present amount of the examination fee is:

DEM	GBP	FRF	CHF	NLG	SEK	BEF/LUF	ITL	ATS	ESP	GRD	DKK
2800	959	9660	2350	3200	12670	58700	2828000	20000	241400	500000	11000
PTE	IEP	FIM	CYP								
289900	1077	8620	854								

The deficiency may be remedied within a period of grace of ONE MONTH of notification of this communication provided that a surcharge of 50 % of the examination fee is paid (Rule 85b EPC). Otherwise you will be informed, in accordance with Rule 69(1) EPC, that the application is deemed to be withdrawn.

The applicant may not be re-established in his rights.

If the acts (filing of the written request and payment of the examination fee) have been completed in the meantime, only the payment of the surcharge in due time is necessary.

RECEIVING SECTION

*M. Graham*

M. Graham  
tel: (070) 3402020  
The Hague

REGISTERED LETTER

EPO Form 1218 (08.98)

7006047

02/10/98

97915064.6 PFEE

EXAM\*

\*M01\*

003

**FALK & FISH, LLP** A Texas Limited Liability Partnership

---

COUNSELORS AT LAW  
INTELLECTUAL PROPERTY MATTERS

16590 OAK VIEW CIRCLE  
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ROBERT HARDY FALK, P.C.\*  
RONALD CRAIG FISH, P.C.†  
G. BYRON JAMISON

ROBERT P. HOAG  
RICHARD V. PERSON, Resident Chemist

†CALIFORNIA AND TEXAS BAR  
\*TEXAS BAR

December 14, 1998

Mr. Shlomo Rakib  
**Terayon Corporation**  
2952 Bunker Hill Lane  
Santa Clara, California 95054

Re: **DATA TRANSMISSION USING ATM OVER HYBRID FIBER COAX**  
Inventor: Fuhrmann et al.  
Serial No.  
Filing Date:  
Patent No.  
Docket No. TER-004.2P

Dear Shlomo:

Enclosed, please find a copy for your files of the subject U.S. stage patent application including the specification, drawings and a Declaration for Patent Application. I would like to file this at the USPTO as soon as I have your signed Declarations back from you and Yehuda. I am forwarding a copy of the patent application and Declaration to Amir at his last known address in an attempt to get his signature. The application is identical in text to the PCT application TER-004.1P P which was previously sent to you.

With kindest regards,  
**FALK & FISH LLP**



Ronald Craig Fish

ExH. M

**PRIVILEGED AND CONFIDENTIAL  
ATTORNEY-CLIENT COMMUNICATION**

**FALK & FISH, LLP** A Texas Limited Liability Partnership

---

COUNSELORS AT LAW  
INTELLECTUAL PROPERTY MATTERS

16590 OAK VIEW CIRCLE  
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ROBERT HARDY FALK, P.C.\*  
RONALD CRAIG FISH, P.C.†  
G. BYRON JAMISON

ROBERT P. HOAG  
RICHARD V. PERSON, Resident Chemist

†CALIFORNIA AND TEXAS BAR  
\*TEXAS BAR

December 14, 1998

Mr. Amir Fuhrmann  
444 Saratoga Avenue, #15G  
Santa Clara, California 95050

Re: **DATA TRANSMISSION USING ATM OVER HYBRID FIBER COAX**  
Inventor: Fuhrmann et al.  
Serial No.  
Filing Date:  
Patent No.  
Docket No. TER-004.2P

Dear Amir:

Enclosed, please find a copy for your files of the subject U.S. national stage patent application including the specification, drawings and a Declaration for Patent Application based upon the PCT application TER-004.1P P which I previously filed. I would like to file this at the USPTO as soon as I have your signed Declaration back. The application is identical in text to the PCT application TER-004.1P P which was previously sent to you. Please call me if you have any questions.

With kindest regards,  
**FALK & FISH LLP**



Ronald Craig Fish

ExH. N

**PRIVILEGED AND CONFIDENTIAL  
ATTORNEY-CLIENT COMMUNICATION**

**DECLARATION FOR PATENT APPLICATION**

Inventor(s): Amir Michael Fuhrmann, Selim Shlomo Rakib and  
Yehuda Azenkot  
Docket No. TER-004.2P

As a below-named inventor, I (We) hereby declare that:

My correct residence, post office address and citizenship are stated below next to my name.

I believe myself to be the original, first and sole inventor (if only one name is listed below) or an original and first joint inventor (if more than one name is listed below) of the subject matter which is disclosed and claimed and for which a patent is sought on the invention entitled: DATA TRANSMISSION USING ATM OVER HYBRID FIBER COAX.

The specification of this subject matter:

- ☒ is attached hereto.
- ☐ was filed on \_\_\_\_\_;
- was assigned serial No. \_\_\_\_\_;
- which was amended on \_\_\_\_\_.

I hereby state that I have reviewed and understand the contents of the above identified patent application, including the claims, as amended by any amendment(s) referred to above. I believe the subject matter claimed in the above-identified application to be new and to be unobvious to persons of ordinary skill in the art in view of the prior art of which I am aware. I further hereby state that the specification of the above identified patent application adequately describes how to make and use the claimed invention, and further that it sets forth the best mode for practicing the invention known to me as of the date that the application was filed. I acknowledge the duty to disclose information which is material to the examination of this application in accordance with 37 C.F.R. 1.56. I further acknowledge the duty to disclose information known to me to be material under 37 C.F.R. 1.56 to the examination of the claims in any continuation-in-part application filed under the conditions specified in 35 U.S.C. Section 120 which became available between the filing date of the prior application or the national or PCT international filing date and the filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below

any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

Application No.	Country	Filing Date	Priority Claimed
PCT/US96/12391	PCT	07/25/96	YES
PCT/US97/03984	PCT	03/12/97	YES

I hereby claim the benefit under 35 U.S.C. §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in these prior United States application(s) in the manner provided by 35 U.S.C. §112, I acknowledge the duty to disclose material information as defined in 37 C.F.R. §1.56(a) which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application.

Application No.	Filing Date	Status (Issued, Pending, Abandoned)
08/519,630	08/25/95	Allowed
08/588,650	01/19/96	Pending
08/616,071	03/14/96	Pending
08/684,243	07/19/96	Pending
08/760,412	12/04/96	Pending

FULL NAME OF INVENTOR	FIRST Name	MIDDLE Initial(s)	LAST Name
	AMIR	MICHAEL	FUHRMANN

---

RESIDENCE AND CITIZENSHIP	City	State or Foreign Country	Country of Citizenship
	SANTA CLARA	CALIFORNIA, U.S.A.	U.S.A.

POST OFFICE ADDRESS	Number and Street	City	State or Country	Zip Code
	444 SARATOGA AVE. #15G	SANTA CLARA	CALIFORNIA	95050

FULL NAME OF INVENTOR	FIRST Name	MIDDLE Initial(s)	LAST Name
	SELIM	SHLOMO	RAKIB

RESIDENCE AND CITIZENSHIP	City	State or Foreign Country	Country of Citizenship
	CUPERTINO	CALIFORNIA, U.S.A.	ISRAEL

POST OFFICE ADDRESS	Number and Street	City	State or Country	Zip Code
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FULL NAME OF INVENTOR	FIRST Name	MIDDLE Initial(s)	LAST Name
	YEHUDA		AZENKOT

RESIDENCE AND CITIZENSHIP	City	State or Foreign Country	Country of Citizenship
	CUPERTINO	CALIFORNIA, U.S.A.	ISRAEL

POST OFFICE ADDRESS	Number and Street	City	State or Country	Zip Code
	1128 LITTLE OAK CIRCLE	SAN JOSE	CALIFORNIA	95129-3137

Docket Number IER-004.2P

PATENT

I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith:

Ronald C. Fish (28,843)

Address all telephone calls to Ronald C. Fish at telephone no. (408) 778-3824

Address all correspondence to Ronald Craig Fish

Falk, Vestal & Fish  
16590 Oak View Circle  
Morgan Hill, California 95037  
U.S.A.  
FAX No. (408) 776-0426

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Title 18, United States Code, §1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Signature of Inventor 1

Date

Signature of Inventor 2

Date

Yehuda Azarkot

12/23/98

Signature of Inventor 3

Date

I hereby certify that this correspondence as being deposited with the United States Postal Service as express mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington D.C., 20231, on 12/23  
19 98 Express Mail Receipt No. EM 429087494US

12/23/98  
Date of Signature

Ronald C. Fish

Declaration for Patent Application

Page 3 of 3

Docket Number IER-004.2P

PATENT

I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith:

Ronald C. Fish (28,843)

Address all telephone calls to Ronald C. Fish at telephone no. (408) 778-3624

Address all correspondence to Ronald Craig Fish

Falk, Vestal & Fish  
16580 Oak View Circle  
Morgan Hill, California 95037  
U.S.A.  
FAX No. (408) 778-0426

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Title 18, United States Code, §1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Signature of Inventor 1 \_\_\_\_\_ Date \_\_\_\_\_

[Signature] 12/17/98  
Signature of Inventor 2 \_\_\_\_\_ Date \_\_\_\_\_

Signature of Inventor 3 \_\_\_\_\_ Date \_\_\_\_\_

I hereby certify that this correspondence as being deposited with the United States Postal Service as express mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington D.C., 20231, on 12/23 19 98 Express Mail Receipt No. EM 42908749445  
12/23/98 Ronald C Fish  
Date of Signature \_\_\_\_\_



RONALD CRAIG FISH, A LAW CORP.

16590 OAK VIEW CIRCLE  
MORGAN HILL, CA 95037  
(408) 778-3624 FAX (408) 776-0426

BANK OF AMERICA  
SAN JOSE, CA 95159

11-35/1210 - 157

4233

12/23/98

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Commissioner of Patents  
and Trademarks  
Washington, D.C. 20231

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MEMO TER-004.2P Filing Fee

*Ronald Craig Fish* MP

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RONALD CRAIG FISH, A LAW CORP.

4233

Account: LawCrp-BofA Ckg  
Date: 12/23/98  
Payee: Commissioner of Patents and Trademarks  
Amount: 593.00  
Memo: TER-004.2P Filing Fee

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Customs forms and commercial invoice may be required. See Pub. 273 and International Mail Manual.		Int'l Alpha Country Code		Mo		Time	
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CA 95037-6918		WASHINGTON		Mo		Time	
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Ex 7. Q

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**Inventors** Fuhrmann, Rakib and Azenkot

**Serial No.** unknown

**Filing Date** 12/23/98

**Title** DATA TRANSMISSION USING ATM OVER HYBRID FIBER COAX

**Attorney:** RONALD CRAIG FISH

**Docket No.** TER-004.2P

**Today's Date:** DECEMBER 23, 1998

**Papers Filed:**

1. Transmittal letter designating US filing under 35 U.S.C. 371 including fee calculation sheet
2. Amendment (2 pages)
3. A faxed signature signed Declaration for Patent Application signed by inventors Rakib and Azenkot only and a faxed signature signed Verified Statement Claiming Small Entity Status
4. Information Disclosure Statement
5. Check in the amount of \$593.00
6. Return Post Card

Please acknowledge receipt of the following by affixing hereon the Patent Office date stamp and returning this card to our office.

**Inventors** Fuhrmann, Rakib and Azenkot

**Serial No.** unknown

**Filing Date** 12/23/98

**Title** DATA TRANSMISSION USING ATM OVER HYBRID FIBER COAX

**Attorney:** RONALD CRAIG FISH

**Docket No.** TER-004.2P

**Today's Date:** DECEMBER 23, 1998

**Papers Filed:**

1. Transmittal letter designating US filing under 35 U.S.C. 371 including fee calculation sheet
2. Amendment (2 pages)
3. A faxed signature signed Declaration for Patent Application signed by inventors Rakib and Azenkot only and a faxed signature signed Verified Statement Claiming Small Entity Status
4. Information Disclosure Statement
5. Check in the amount of \$593.00
6. Return Post Card

63 Rec'd PCT/PTD 23 DEC 1998

09/214158

EXH. R

09/214158


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Patent and Trademark Office**

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U.S. APPLICATION NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
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09/214,158

FURHMANN

5071

 RONALD CRAIG FISH  
FALK VESTAL & FISH  
16590 OAK VIEW CIRCLE  
MORGAN HILL CA 95037

A	TER-004
INTERNATIONAL APPLICATION NO.	

PCT/US97/03984

I.A. FILING DATE	PRIORITY DATE
------------------	---------------

 03/12/97 00/00/00  
08/03/99

DATE MAILED:

**NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)**

1. The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as

☐ a Designated Office (37 CFR 1.494),  
☒ an Elected Office (37 CFR 1.495):

☒ U.S. Basic National Fee.

☒ Copy of the international application in:

☐ a non-English language.  
☒ English.

☐ Translation of the international application into English.

☒ Oath or Declaration of inventors(s) for DO/EO/US.

☐ Copy of Article 19 amendments.

☐ Translation of Article 19 amendments into English.

☒ The International Preliminary Examination Report in English and its Annexes, if any.

☐ Translation of Annexes to the International Preliminary Examination Report into English.

☒ Preliminary amendment(s) filed Dec 23, 1998 and                     .

☒ Information Disclosure Statement(s) filed Dec 23, 1998 and                     .

☐ Assignment document.

☐ Power of Attorney and/or Change of Address.

☐ Substitute specification filed                     .

☒ Statement Claiming Small Entity Status.

☐ Priority Document.

☒ Copy of the International Search Report ☐ and copies of the references cited therein.

☒ Other: 31

2. The following items MUST be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

☐ a. Translation of the application into English. Note a processing fee will be required if submitted later than the appropriate 20 or 30 months from the priority date.

☐ The current translation is defective for the reasons indicated on the attached Notice of Defective Translation.

☐ b. Processing fee for providing the translation of the application and/or the Annexes later than the appropriate 20 or 30 months from the priority date (37 CFR 1.492(f)).

☒ c. Oath or declaration of the inventors, in compliance with 37 CFR 1.497(a) and (b), identifying the application by the international application number and international filing date.

☒ The current oath or declaration does not comply with 37 CFR 1.497(a) and (b) for the reasons indicated on the attached PCT/DO/EO/917.

☐ d. Surcharge for providing the oath or declaration later than the appropriate 20 or 30 months from the priority date (37 CFR 1.492(e)).

3. Additional claim fees of \$                      as a ☐ large entity ☐ small entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due (37 CFR 1.492(g)). See attached PTO-875.

ALL OF THE ITEMS SET FORTH IN 2(a)-(d) AND 3 ABOVE MUST BE SUBMITTED WITHIN ONE MONTH FROM THE DATE OF THIS NOTICE OR BY ☐ 21 OR ☒ 31 MONTHS FROM THE PRIORITY DATE FOR THE APPLICATION, WHICHEVER IS LATER. FAILURE TO PROPERLY RESPOND WILL RESULT IN ABANDONMENT.

The time period set above may be extended by filing a petition and fee for extension of time under the provisions of 37 CFR 1.136(a).

4. Translation of the Annexes MUST be submitted no later than the time period set above or the annexes will be cancelled. Note processing fee will be required if submitted later than 30 months from the priority date.

5. ☐ The Article 19 amendments are cancelled since a translation was not provided by the appropriate 20 (37 CFR 1.494(d)) or 30 (37 CFR 1.495(d)) months from the priority date.

Applicant is reminded that any communication to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above. (37 CFR 1.5)

**A copy of this notice MUST be returned with this response.**

 Enclosed: ☒ PCT/DO/EO/917

☐ Notice of Defective Translation

☐ PTO-875

FORM PCT/DO/EO/905 (December 1997)

Telephone: (703) 308-9116

E X H. 5 (2 PAGES)

09/214158



## UNITED STATES DEPARTMENT OF COMMERCE

Patent and Trademark Office

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U.S. APPLICATION NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
09/214,158	FURHMANN	
RONALD CRAIG FISH FALK VESTAL & FISH 16590 OAK VIEW CIRCLE MORGAN HILL CA 95037		A TFR-004.2P INTERNATIONAL APPLICATION NO. PCT/US97/03984 I.A. FILING DATE PRIORITY DATE 03/12/97 00/00/00 08/03/99

DATE MAILED:

### NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)

1. The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as

- ☐ a Designated Office (37 CFR 1.494),  
☒ an Elected Office (37 CFR 1.495):

☒ U.S. Basic National Fee.

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- ☐ a non-English language.  
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☒ Other: 313

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3. Additional claim fees of \$ \_\_\_\_\_ as a ☐ large entity ☐ small entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due (37 CFR 1.492(g)). See attached PTO-875.

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**A copy of this notice MUST be returned with this response.**

Enclosed: ☒ PCT/DO/EO/917

☐ Notice of Defective Translation

☐ PTO-875

FORM PCT/DO/EO/905 (December 1997)

Telephone: (703) 308-9116

**FALK & FISH** An Association of Professional Law Corporations

---

COUNSELORS AT LAW  
INTELLECTUAL PROPERTY MATTERS

16590 OAK VIEW CIRCLE  
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TEL: (408) 778-3624  
FAX: (408) 776-0426

HTTP://WWW.PATENT.NET

ROBERT HARDY FALK, P.C.\*  
RONALD CRAIG FISH, P.C.#

\*Admitted in Texas  
Resident - Dallas Office

#Admitted in California and Texas  
Resident - Silicon Valley Office  
RCFIPLAW@PACBELL.NET  
Nationwide Pager (408) 682-1875  
Cellular (408) 313-4508

April 10, 2000

**VIA REGISTERED MAIL**

Mr. Amir Fuhrmann  
444 Saratoga Avenue, #15G  
Santa Clara, California 95050

Re: **DATA TRANSMISSION USING ATM OVER HYBRID FIBER COAX**

Inventor: Fuhrmann et al.  
Serial No. 09/214,158  
Filing Date: 12/23/98  
Patent No.  
Docket No. TER-004.2P

Dear Amir:

Enclosed, please find a copy for your files of the subject U.S. national stage patent application including the specification, drawings and a Declaration for Patent Application based upon the PCT application TER-004.1P P which I previously filed on December 23, 1998. The application is identical in text to the PCT application TER-004.1P P which was previously given to you while you were at Terayon. Please sign the Declaration For Patent Application at the red X on page 4 and date your signature. Please call me if you have any questions.

With kindest regards,  
**Ronald Craig Fish, A Law Corporation**



Ronald Craig Fish

EXH T

**PRIVILEGED AND CONFIDENTIAL  
ATTORNEY-CLIENT COMMUNICATION**

**DECLARATION FOR PATENT APPLICATION**

Inventor(s): Amir Michael Fuhrmann, Selim Shlomo Rakib and  
Yehuda Azenkot  
Docket No. TER-004.2P

As a below-named inventor, I (We) hereby declare that:

My correct residence, post office address and citizenship are stated below next to my name.

I believe myself to be the original, first and sole inventor (if only one name is listed below) or an original and first joint inventor (if more than one name is listed below) of the subject matter which is disclosed and claimed and for which a patent is sought on the invention entitled: DATA TRANSMISSION USING ATM OVER HYBRID FIBER COAX.

The specification of this subject matter:

- ☒ Is attached hereto.
- ☐ was filed on \_\_\_\_\_;
- was assigned serial No. \_\_\_\_\_;
- which was amended on \_\_\_\_\_.

I hereby state that I have reviewed and understand the contents of the above identified patent application, including the claims, as amended by any amendment(s) referred to above. I believe the subject matter claimed in the above-identified application to be new and to be unobvious to persons of ordinary skill in the art in view of the prior art of which I am aware. I further hereby state that the specification of the above identified patent application adequately describes how to make and use the claimed invention, and further that it sets forth the best mode for practicing the invention known to me as of the date that the application was filed. I acknowledge the duty to disclose information which is material to the examination of this application in accordance with 37 C.F.R. 1.56. I further acknowledge the duty to disclose information known to me to be material under 37 C.F.R. 1.56 to the examination of the claims in any continuation-in-part application filed under the conditions specified in 35 U.S.C. Section 120 which became available between the filing date of the prior application or the national or PCT international filing date and the filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below

any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

Application No.	Country	Filing Date	Priority Claimed
PCT/US96/12391	PCT	07/25/96	YES
PCT/US97/03984	PCT	03/12/97	YES

I hereby claim the benefit under 35 U.S.C. §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in these prior United States application(s) in the manner provided by 35 U.S.C. §112, I acknowledge the duty to disclose material information as defined in 37 C.F.R. §1.56(a) which occurred between the filing date of the prior application(s) and the national or PCT International filing date of this application.

Application No.	Filing Date	Status (Issued, Pending, Abandoned)
08/519,630	08/25/95	Allowed
08/588,650	01/19/96	Pending
08/616,071	03/14/96	Pending
08/684,243	07/19/96	Pending
08/760,412	12/04/96	Pending

<b>FULL NAME OF INVENTOR</b>	<b>FIRST Name</b> AMIR	<b>MIDDLE Initial(s)</b> MICHAEL	<b>LAST Name</b> FUHRMANN	
<b>RESIDENCE AND CITIZENSHIP</b>	<b>City</b> SANTA CLARA	<b>State or Foreign Country</b> CALIFORNIA, U.S.A.	<b>Country of Citizenship</b> U.S.A.	
<b>POST OFFICE ADDRESS</b>	<b>Number and Street</b> 444 SARATOGA AVE. #15G	<b>City</b> SANTA CLARA	<b>State or Country</b> CALIFORNIA	<b>Zip Code</b> 95050
<b>FULL NAME OF INVENTOR</b>	<b>FIRST Name</b> SELIM	<b>MIDDLE Initial(s)</b> SHLOMO	<b>LAST Name</b> RAKIB	
<b>RESIDENCE AND CITIZENSHIP</b>	<b>City</b> CUPERTINO	<b>State or Foreign Country</b> CALIFORNIA, U.S.A.	<b>Country of Citizenship</b> ISRAEL	
<b>POST OFFICE ADDRESS</b>	<b>Number and Street</b> 10271 WEST ACRES	<b>City</b> CUPERTINO	<b>State or Country</b> CALIFORNIA	<b>Zip Code</b> 95014
<b>FULL NAME OF INVENTOR</b>	<b>FIRST Name</b> YEHUDA	<b>MIDDLE Initial(s)</b>	<b>LAST Name</b> AZENKOT	
<b>RESIDENCE AND CITIZENSHIP</b>	<b>City</b> CUPERTINO	<b>State or Foreign Country</b> CALIFORNIA, U.S.A.	<b>Country of Citizenship</b> ISRAEL	
<b>POST OFFICE ADDRESS</b>	<b>Number and Street</b> 1128 LITTLE OAK CIRCLE	<b>City</b> SAN JOSE	<b>State or Country</b> CALIFORNIA	<b>Zip Code</b> 95129-3137



I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith:

Ronald C. Fish (28,843)

Address all telephone calls to Ronald C. Fish at telephone no. (408) 778-3824

Address all correspondence to Ronald Craig Fish

Falk, Vestal & Fish  
16590 Oak View Circle  
Morgan Hill, California 95037  
U.S.A.  
FAX No. (408) 776-0426

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Title 18, United States Code, §1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Signature of Inventor 1

Date

Signature of Inventor 2

Date

Yehuda Azarkot

12/23/98

Signature of Inventor 3

Date

I hereby certify that this correspondence as being deposited with the United States Postal Service as express mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington D.C., 20231, on 12/23  
19 98 Express Mail Receipt No. EM 429087494US

12/23/98  
Date of Signature

Ronald C. Fish

Docket Number IER-004.2P

PATENT

I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith:

Ronald C. Fish (28,843)

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Address all correspondence to Ronald Craig Fish

Falk, Vestal & Fish  
16590 Oak View Circle  
Morgan Hill, California 95037  
U.S.A.  
FAX No. (408) 778-0428

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Title 18, United States Code, §1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

\_\_\_\_\_  
Signature of Inventor 1 Date

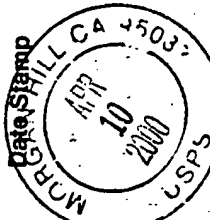
*[Signature]* 12/17/98  
Signature of Inventor 2 Date

\_\_\_\_\_  
Signature of Inventor 3 Date

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12/23/98 Ronald C Fish  
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FROM		TO
Ron Fish		
16590 DAK VIEW CIRCLE		
95037 MORGAN HILL, CA.		
AMIR FUHARMAN		
444 SARATOGA AVE #15G		
SANTA CLARA CA. 95050		

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FALK & FISH

COUNSELORS AT LAW

16590 OAK VIEW CIRCLE

MORGAN HILL, CALIFORNIA 95037

TO: AMIR FUHRMANN

444 SARATOGA AVE

#156

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No such street number  
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